



PATENT ABSTRACTS OF JAPAN

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H01L 21/3065**H01L 21/265****H01L 21/28****H01L 27/108****H01L 21/8242**(21) Application number: **10205658**(71) Applicant: **OKI ELECTRIC IND CO LTD**(22) Date of filing: **21.07.98**(72) Inventor: **MIYAGAWA YASU HARU**(54) **MANUFACTURE OF SEMICONDUCTOR DEVICE**

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(57) Abstract:

PROBLEM TO BE SOLVED: To provide a technique for performing the opening of a contact hole, and others by etching a silicon oxide film in a self alignment manner, with a silicon nitride film geared to the micronization and aspect ratio elevation of a semiconductor as a stopper.

SOLUTION: In the manufacture of a semiconductor device which includes an etching process for etching a silicon oxide film 106 with a silicon nitride film 107 as a stopper, the selection ratio of silicon oxide to silicon nitride in the above etching is increased by implanting one or more kinds of atoms selected from the group consisting of carbon and atoms, whose reactivity to fluorine and oxygen is equivalent to carbon into the silicon nitride film 107 by ion implantation method before the etching process.

